7. (Amended) The method as set forth in claim 1, wherein the molten water-soluble salt is added with 5 ~ 30 wt% of chemically non-reactive, fine hard particles, said fine hard particles being selected from the group consisting of powders, fibers and whiskers of metals or ceramics, and mixtures thereof.

8. (Amended) A disintegrative core for high pressure casting, manufactured according to the method of claim 1.

REMARKS

The above-referenced application is amended to delete the multiple dependencies of claims 4 to 8.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Marked-Up Version Showing Changes".

Respectfully submitted,

LOWE HAUPTMAN GILMAN & BERNER, LLP

Benjamin J. Hauptman
Registration Number 29,310

Date: January 4, 2002
1700 Diagonal Road, Suite 310
Alexandria, Virginia 22314
(703) 684-1111

MARKED-UP VERSION SHOWING CHANGES

CLAIMS

1. A method for manufacturing a disintegrative core for high pressure casting, wherein a water-soluble salt, alone or in combination with a fine hard powder, is melted and solidified in a core mold; or processed into a fine powder and molded in a core mold under a pressure, said water soluble salt ranging from 280 to 520 °C in melting point and from $9.8x10^{-2}$ to 1.2x10 W/m·°C in heat transfer coefficient (κ) with a high latent heat, whereby the disintegrative core can be applied where a light metal such as aluminum alloy or magnesium alloy is subjected to high pressure casting, such as die casting or squeeze casting and is manufactured from the water-soluble salt.

2. The method as set forth in claim 1, wherein the water-soluble salt is selected from the group consisting of KNO_3, KNO_2, $NaNO_3$, $NaNO_2$, and mixtures thereof.

3. The method as set forth in claim 1, wherein the water-soluble salt is selected from the group consisting of salt mixtures, by weight percentage, of 82:17 NaCl:$CuCl_2$, 92:8 KNO_3:KCl, 54:46 KCl:LiCl, 93:7 $PbCl_2$:NaCl, 54:44 $MgCl_2$:NaCl, 53:47 $CaCl_2$:$BaCl_2$, and 54:46 NaCl:$CaCl_2$.

4. The method as set forth in ~~any one of claims 1 to 3~~ claim 1 wherein the water-soluble salt is melted at a temperature higher by 30~80 °C than that of its melting temperature and solidified in a mold.

5. The method as set forth in ~~any one of claims 1 to 3~~ claim 1, wherein the mold is made of graphite and heated to half of the melting temperature of the salt.

MARKED-UP VERSION SHOWING CHANGES

6. The method as set forth in [~~any one of claims 1 to 3~~ claim 1], wherein the water-soluble salt is processed into a powder with a particle size of 40~100 μm, introduced into the mold and molded under a pressure of 80~100 Mpa.

7. The method as set forth in [~~any one of claims 1 to 3~~ claim 1], wherein the molten water-soluble salt is added with 5~30 wt% of chemically non-reactive, fine hard particles, said fine hard particles being selected from the group consisting of powders, fibers and whiskers of metal or ceramics, and mixtures thereof.

8. A disintegrative core for high pressure casting, manufactured according to the method of [~~any one of claims 1 to 7~~ claim 1]

9. A method for extracting a disintegrative core for high pressure casting wherein the core is heated to a melting temperature at which the high pressure cast article is not thermally deformed, the core melt is extracted, and the cast article is washed with water.

10. The method as set forth in claim 9, wherein the high pressure cast article is heated at 320~550 °C for 3~5 minutes, whereby the heat is transferred to the inside of the core so that the core is melted and extracted.